

Abstract

The present invention is directed to methods for immobilizing natural or synthetic biomolecules to surfaces comprising covalently linking the natural or synthetic biomolecule to a mono- or bi-functional polymer and covalently and/or electrostatically immobilizing the biomolecule/polymer conjugate to an unmodified or modified surface wherein the biomolecule is an oligonucleotide, a polynucleotide, a protein, a glycoprotein, a peptide or a carbohydrate that has been modified to incorporate a single or plurality of nucleophilic groups comprising an aliphatic or aromatic amino, thiol, hydrazine, thiosemicarbazide, hydrazide, thiocarbazide, carbazide, aminooxy, a derivative of 2-hydrazinopyridine or aminooxyacetic acid or a single or plurality of electrophilic groups comprising an aliphatic or aromatic aldehyde, ketone, epoxide, isocyanate, isothiocyanate, succinimidyl ester or cyanuric chloride or a linkable aromatic aldehyde or ketone and the surface has been modified to possess either neutral, cationic or anionic groups or a combination neutral, anionic and/or cationic moieties.